

July 2015

Anderson County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

A total of 15 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Anderson County economy.¹ These 15 sectors have a total direct output of approximately \$122 million and support 680.1 jobs in Anderson County. Running the model for all 15 sectors simultaneously produces the following results:

Agriculture Contribution in Anderson County

Impact Type ²	Employment	% of Total Employment	Total Value Added ³	% of Gross Regional Product ⁴	Output ⁵	% of Gross Regional Product
Direct Effect	680.1	19%	\$62,766,136	26%	\$122,237,431	50%
Indirect Effect	74.0	2%	\$5,661,836	2%	\$10,552,660	4%
Induced Effect	84.3	2%	\$5,711,940	2%	\$9,948,034	4%
Total Effect	838.5	23%	\$74,139,911	31%	\$142,738,125	59%

As shown in the above table, agriculture, food, and food processing supports 838.5 jobs, or 23% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$143 million, roughly 59% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 15 agriculture, food, and food processing sectors is approximately \$74 million, or 31% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 31% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

1. Article on building a contribution analysis in IMPLAN that avoids double counting:
https://implan.com/index.php?option=com_content&view=category&id=19

2. Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

3. Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income

4. GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

5. Output = Intermediate inputs + Value Added

In the top ten by employment, Animal production, except cattle and poultry and eggs is the top employer in the agriculture industry with 253.5 employees. This table also shows the amount of jobs that are created by the agriculture industry in Anderson County.

Top 10 Industries Affected by Employment

Sector Description:	Total Employment	Total Output
Animal production, except cattle and poultry and eggs.....	253.5	\$20,791,002
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	163.9	\$34,391,103
All other crop farming.....	123.2	\$12,660,978
Grain farming	67.0	\$18,985,573
Veterinary services	18.6	\$1,003,694
Dairy cattle and milk production.....	18.1	\$2,730,717
Wholesale trade.....	17.2	\$3,354,155
Oilseed farming.....	15.3	\$26,802,832
Monetary authorities and depository credit intermediation	12.0	\$1,812,820
Hospitals.....	10.8	\$1,291,440

The Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming industry directly contributes approximately \$34 million to Anderson County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Top 10 Industries Affected by Output

Sector Description:	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	163.9	\$34,391,103
Oilseed farming.....	15.3	\$26,802,832
Animal production, except cattle and poultry and eggs.....	253.5	\$20,791,002
Grain farming	67.0	\$18,985,573
All other crop farming.....	123.2	\$12,660,978
Wholesale trade	17.2	\$3,354,155
Dairy cattle and milk production.....	18.1	\$2,730,717
Owner-occupied dwellings	0.0	\$2,432,369
Truck transportation.....	10.0	\$1,819,139
Monetary authorities and depository credit intermediation	12.0	\$1,812,820

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Anderson County's economy.

[illegible]

All 105 counties in Kansas have IMPLAN models with an agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.